4 channel Data Recorder DA-21

32 GB & 8 channels
Support for high-capacity memory cards up to 32 GB

Inter-unit synchronization:
max. 8 channels

4 channel Data Recorder
DA-21
The 4 channel Data Recorder DA-21 is capable of recording acoustic / vibration waveforms and various electrical signals in the field. Recorded data are saved in WAVE format on SD cards and can be imported into a computer for waveform analysis and other processing tasks.

4 channel Data Recorder DA-21

Playback of recorded data supported

Silent operation without any moving parts. Able to operate also in difficult environments subject to vibration and humidity.

Voice memo recording function

Bar graph provides visual level indication

Software DA-21 data can be displayed and analyzed in various software packages

Viewer Software AS-70 Viewer  
Reads WAVE format files produced by the DA-21 and enables functions such as waveform display, level display, file output (WAVE format/CSV format), and playback. Display of inter-unit synchronization data is also supported.

Waveform Analysis Software AS-70  
Option

Specifications

Graph | Display types | Amplitude waveform, level waveform

Frequency weighting characteristics | Z, A, C, G, C to A, vertical vibration characteristics, horizontal vibration characteristics

Time weighting characteristics | 10 ms, F (Fast), 630 ms, F (Fast), 10 s

Statistical processing | Amplitude waveform: Minimum value, minimum value, average value, effective value, Interamplitude waveform: 1/2, 1/3, 1/4, 1/5, 1/6 types

Viewer software AS-70 Viewer / Waveform Analysis Software AS-70  
CPU: Intel Core i5 2 GHz or faster  
RAM: 2 GB or more, 4 GB recommended  
HDD: 20 GB or more

Waveform analysis software CAT-WAVE  
CPU: Intel Core i5 1.4 GHz or more (Core2 Duo 2 GHz or more)  
RAM: 2 GB or more  
HDD: 60 GB or more (free space required)
**System Configuration**

(Other equipment is optional)

- **DA-21**
- **Computer**
- **USB Cable**
- **SD card**
- **Battery Pack**

**Battery Life**

Using four IEC R6 (size AA) alkaline batteries

- **Approx. 8 hours**
- **Using Battery Pack BP-21A with four IEC R20 (size D) alkaline batteries**

- **Approx. 30 hours**

**Improvements compared to predecessor model DA-20**

- Support for high-capacity SD cards (max. 32 GB)
- **24-bit Quantization**
- Use as USB storage supported (recognized as removable disk)
- Additional rotary signal input (dedicated connector)
- Inter-unit synchronization (max. 8 channels)
- Separate input and playback output connectors
- Time trigger function added

**Specifications**

- **Waveform Analysis Software**
  - CAT-WAVE
  - Option
  - **This software is a product of Catec Inc.**

- **Battery Life**
  - **Using four IEC R6 (size AA) alkaline batteries**
  - **Approx. 8 hours**
  - **Using Battery Pack BP-21A with four IEC R20 (size D) alkaline batteries**
  - **Approx. 30 hours**

**Processing functions**

- Maximum value, minimum value, average value, effective value, distribution, differentiation and integration, HPF, LPF

**Data view**

- **Power spectrum, power spectrum density, spectrogram**
- **32 to 65 536 points**
- **2, 4, 8, 16, 32, 64 kHz**

**Data and analysis**

- **10 ms, 50 ms, 200 ms, 1 s (500 Hz)**
- **Time weighting characteristics**
  - **1 ms, 10 ms, 50 ms, F (Fast), 200 ms, 1 s (Slow), 10 s**
  - **Frequency weighting characteristics**

**Frequency band**

- **0.5 Hz to 16 kHz**
- **0.5 Hz to 10 kHz**
- **0.36 Hz to 11 kHz**

**Characteristics**

- **1/2 inch electret condenser microphone**
- **UC-52/57/59**
- **3-axis Piezoelectric Accelerometer**
- **PV-97C**
- **PV-97C/93**
- **Piezoelectric Accelerometer**
- **PV-8A/85/90H**
- **PV-97T/97 (3-Axis)**

**Connections**

- **BNC-BNC Coaxial Cable**
- **IC-60 Series**
- **BNC Adapter VP-52C**
- **Accelerometer VP-51 series**
- **Accelerometer Cable VP-51 series**
- **BNC-7P (3-Axis)**

**Other**

- **Soft Carrying Case**
- **Monitor earphone**
- **Voice memo microphone**
- **Remote Controller**
- **AC Adapter**

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Waveform Analysis Software CAT-WAVE

Reads WAVE format files produced by the DA-21 and enables functions such as octave band analysis, 1/3 octave band analysis, and FFT analysis. Inter-channel processing functions such as cross spectrum and transfer function, as well as 1/12 octave band analysis are also possible. (Tracking analysis can be added as an option.)

**Specifications**

- **Waveform**
  - Display
  - **Scaled time axis, Differential and integral calculus available**
- **FFT analysis**
  - **Sampling points**
  - **94 to 32 768 points**
  - **Display function**
  - **Power spectrum, cross spectrum, transfer function, coherence, Power spectrum map, Differential and integral calculus for spectrum area**
- **Octave band analysis**
  - **Applicable standard**
  - **32 to 65 536 points**
  - **2, 4, 8, 16, 32, 64 kHz**
- **Time weighting characteristics**
  - **1 ms, 10 ms, 50 ms, F (Fast), 200 ms, 1 s (Slow), 10 s**
- **Frequency weighting characteristics**
  - **FLAT, A, C**
This product is environment-friendly. It does not include toxic chemicals on our policy.

This leaflet is printed with environmentally friendly UV ink on recycled paper.

Specifications 4 channel Data Recorder DA-21

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<tr>
<td>Waveform analysis software</td>
<td>CAT-WAVE</td>
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<td>Charge Converter</td>
<td>VP-40</td>
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<td>Memory card1</td>
<td>MC-32SD3</td>
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<td>AD converter</td>
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<td>4-channel data recorder remote controller</td>
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<td>Monitor earphone</td>
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<td>BNC-BNC coaxial cable</td>
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<td>BNC-BNC cable</td>
<td>NC-39A</td>
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<td>BNC-mini plug Cable</td>
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<td>Comparator output cable (for NL-420/M50)</td>
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<td>Inter-unit sync cable</td>
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<tr>
<td>USB A-Mini B Cable</td>
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1 Use only RION supplied cards for assured operation.
2 When used with the DA-21, BNC mini plug Cable CC-24 and Joint connector VP-54C are required.

Maximum recording times on memory card (SD Card) [Approximate]

<table>
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<tr>
<th>Capacity</th>
<th>Time (h)</th>
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<td>2 GB</td>
<td>1000 hours</td>
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* Windows is a trademark of Microsoft Corporation.

Specifications subject to change without notice.